



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,913	07/15/2003	Anand Huprikar	12163	7163
28484	7590	02/13/2006	EXAMINER	
BASF AKTIENGESELLSCHAFT CARL-BOSCH STRASSE 38, 67056 LUDWIGSHAFEN LUDWIGSHAFEN, 69056 GERMANY			NGUYEN, XUAN LAN T	
			ART UNIT	PAPER NUMBER
			3683	

DATE MAILED: 02/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 6-16, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Pradel (US 6,076,794).

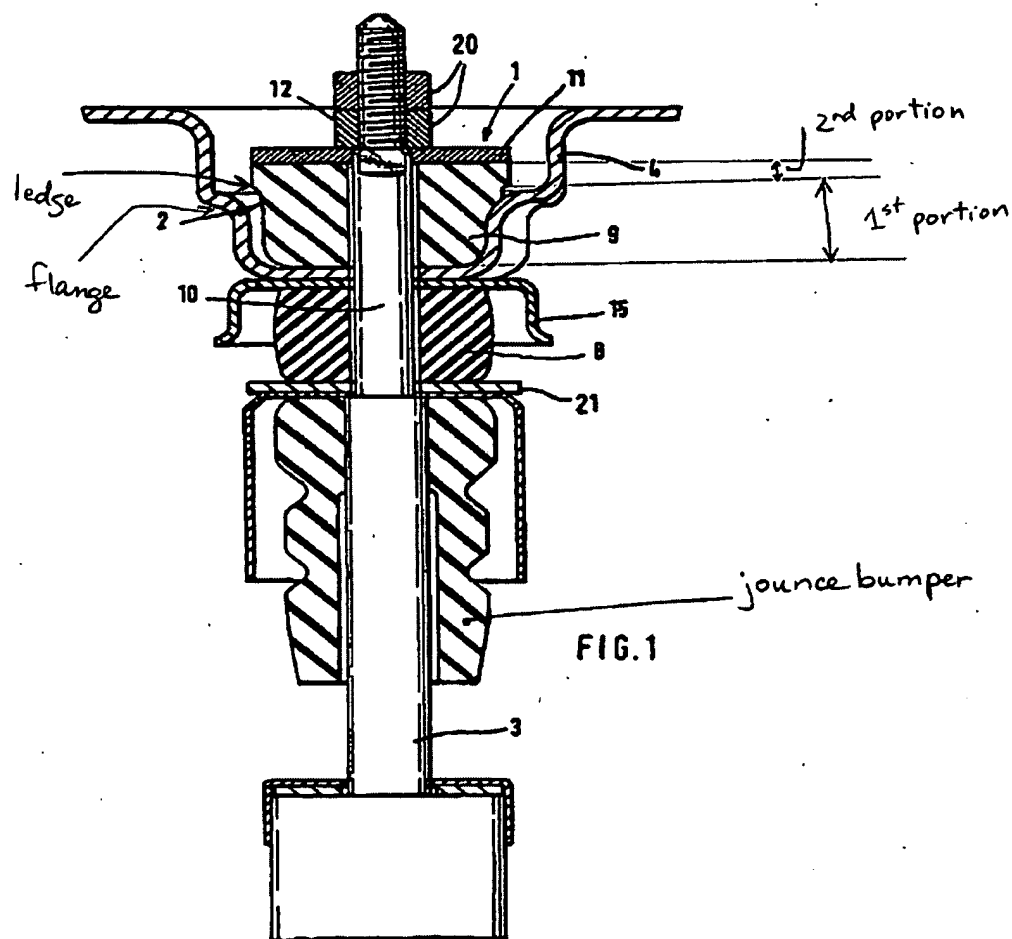
Re: claim 1, Pradel shows a mounting assembly for a wheel suspension system of a vehicle having a vehicle body in figure 1, as in the present invention, said mounting assembly comprising: a support structure 4, 15 having an aperture and adapted to be mounted to the vehicle body; a piston rod 3 at least partially disposed within said aperture and displaceable relative to said support structure along a line of travel; a plate 11 mounted to said piston rod, and moving relative to said support structure during said displacement of said piston rod; and an insulator 9 disposed between said support structure and said plate with said insulator substantially surrounding said piston rod and abutting said plate for coupling said piston rod to said support structure; said insulator having a first portion, as marked below, defining a first resistance and a first maximum width, as shown, for isolating said displacement of said piston rod and said plate during an application of a first force along said line of travel in a first direction, downward, which at least partially compresses said first portion, and a second portion, as marked

Art Unit: 3683

below, defining a second resistance and a second maximum width, as shown, with said second resistance being greater than said first resistance for controlling said displacement of said piston rod and said plate after said application of said first force and during an application of a second force along said line of travel in said first direction, wherein said second force is greater than said first force such that said first portion is compressed before the second portion is compressed; and said second width being larger than said first width to define a ledge, as marked below, on said second portion extending outwardly beyond said width of said first portion; said plate having a width at least equal to said second maximum width of said second portion, as shown; said support structure including a first cup 4 defining a cavity and an inner surface with said first portion of said insulator at least partially disposed within said cavity for compressing said first portion without compressing said ledge and said second portion when said first force is applied; said first portion of said insulator disposed within said cavity defining an exterior surface complementary in configuration with said inner surface of said first cup and contiguous with said inner surface, note the cited definition of the term "contiguous" as touching at a point, Pradel's insulator 9's exterior surface is touching the inner surface of the first cup 4 at a point on the right of the figure below, note also that Pradel's insulator 9's exterior surface is complementary with said inner surface of said cup 4 in terms of being fitted inside of cup 4; said support structure further including a flange as marked below extending outwardly from said first cup 4 with said flange uniformly positioned relative to said ledge with said ledge of said second portion engaging and compressing against said flange during said application of

Art Unit: 3683

said second force to transmit loads of said second force from said plate to said support structure, note that Pradel's flange is considered uniformly positioned relative to said ledge since insulator 9's exterior surface is complementary to the inner surface of cup 4 in order to prevent rotation as stated in column 3, lines 50-54.



Re: claim 2, when the piston rod moves downward, the first portion is compressed before the second portion would be compressed since cup 4 is stationary while the piston rod 3 is moving downwardly relative to cup 4.

Re: claims 3 and 4, figure 1 shows that the first and second portions of the insulator are formed of the same homogenous material.

Re: claims 7 -11, figure 1 shows the insulator 9 with the ledge, first height, second height, first circumference and second circumference as claimed.

Re: claim 12, figure 1 shows said insulator 9 mounted to piston rod 3.

Re: claim 13, figure 1 shows notch 12 with said plate 11 abutting said notch.

Re: claim 16, figure 1 further shows a jounce bumper as marked above.

Re: claims 18 and 19, figure 1 further shows a second insulator 8 mounted within the second cup 15 of the support structure 4, 15.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pradel in view of Tondato.

Pradel's mounting assembly and isolation apparatus, as rejected above, discloses that insulator 9 is made of rubber. Tondato teaches that a micro-cellular polyurethane and a rubber are well known equivalent materials for use in elastomeric deformable elements to absorb vibration, see column 3, lines 60-62. It would have been obvious to one of ordinary skill in the art at the time the invention was made to

have modified Pradel's assembly to include an insulator comprising of a micro-cellular polyurethane material instead of a rubber material since these two materials are old and well known equivalent materials for use in elastomeric deformable elements to absorb vibration as taught by Tondato; and the use of either of these materials is considered to be a matter of choice.

5. Claims 17, 31, 32, 34, 35, 37-39 and 48-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pradel.

Re: claim 17, Pradel's assembly comprises said jounce bumper being mounted to said plate 11 on a same side of said insulator such that loads experienced by said jounce bumper are translated through said plate 11, said ledge of said second portion, and into said support structure while claim 17 requires that said jounce bumper is mounted to said plate on an opposite side from said insulator. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have arranged the plate, the insulator and the jounce bumper as claimed, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. Note that although Pradel's arrangement of the insulator and the jounce bumper on the same side of the plate, the manners in which the force being transmitted to the support structure is the same as claimed in claim 17.

Re: claim 31, Pradel shows a mounting assembly for a wheel suspension system of a vehicle having a vehicle body in figure 1, as in the present invention, said mounting assembly comprising: a support structure 4, 15, having an aperture and adapted to be mounted to the vehicle body; a piston rod 3 at least partially disposed within said

Art Unit: 3683

aperture and displaceable relative to said support structure along a line of travel; a plate 11 mounted to said piston rod, and moving relative to said support structure during said displacement of said piston rod; and an insulator 9 disposed about said piston rod between said support structure and said plate with said insulator abutting said plate for coupling said piston rod to said support structure; said insulator having a first portion, as marked above, defining a first resistance and a first maximum width for isolating said displacement of said piston rod and said plate during an application of a first force along said line of travel in a first direction, downward, which at least partially compresses said first portion, and a second portion, as marked above, defining a second resistance and a second maximum width with said second resistance being greater than said first resistance for controlling said displacement of said piston rod and said plate after said application of said first force and during an application of a second force along said line of travel in said first direction, wherein said second force is greater than said first force such that said first portion is compressed before the second portion is compressed and said second width being larger than said first width to define a ledge, as marked above on said second portion extending outwardly beyond said width of said first portion, and a jounce bumper, as marked above, disposed about said piston rod and mounted to said plate on a same side from said insulator 9 for translating movement of the wheel suspension system during application of said second force; said plate having a width at least equal to said maximum width of said second portion and a maximum width of said jounce bumper, as shown; said support structure including a first cup 4 defining a cavity and an inner surface with said first portion of said insulator at least partially disposed



Art Unit: 3683

within said cavity and configured to be contiguous with said inner surface for compressing said first portion without compressing said ledge and said second portion when said first force is applied; note the cited definition of the term "contiguous" as touching at a point, Pradel's insulator 9's exterior surface is touching the inner surface of the first cup 4 at a point on the right of the figure above; said support structure further including a flange extending outwardly from said first cup, as marked above, with said flange uniformly positioned relative to said ledge for positioning said ledge between said flange and said plate 11 such that during said application of said second force, said ledge of said second portion engages and compresses against said flange to transmit loads of said second force from said plate to said support structure; note that Pradel's flange is considered uniformly positioned relative to said ledge since insulator 9's exterior surface is complementary to the inner surface of cup 4 in order to prevent rotation as stated in column 3, lines 50-54. Pradel's assembly comprises said jounce bumper being mounted to said plate 11 on a same side of said insulator while claim 31 requires that said jounce bumper is mounted to said plate on an opposite side from said insulator. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have arranged the plate, the insulator and the jounce bumper as claimed, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. Note that although Pradel's arrangement of the insulator and the jounce bumper on the same side of the plate, the manners in which the movement of the wheel suspension system being translated during application of said second force is the same as claimed in claim 31.

Re: claim 32, when the piston rod moves downward, the first portion is compressed before the second portion would be compressed since cup 4 is stationary while the piston rod 3 is moving downwardly relative to cup 4.

Re: claims 35, 49-51 and 53 figure 1 shows the insulator 9 with the ledge, a first height, a second height, a first circumference and a second circumference wherein said insulator is being mounted to piston rod as claimed.

Re: claim 37, figure 1 shows notch 12 with said plate 11 abutting said notch.

Re: claims 48 and 52, figure 1 shows that the first and second portions of the insulator are formed of the same homogenous material.

Re: claims 54 and 55, figure 1 further shows a second insulator 8 mounted within the second cup 15 of the support structure 4, 15.

6. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pradel in view of Tondato.

Pradel's mounting assembly and isolation apparatus, as rejected above, discloses that insulator 9 is made of rubber. Tondato teaches that a micro-cellular polyurethane and a rubber are well known equivalent materials for use in elastomeric deformable elements to absorb vibration, see column 3, lines 60-62. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Pradel's assembly to include an insulator comprising of a micro-cellular polyurethane material instead of a rubber material since these two materials are old and well known equivalent materials for use in elastomeric deformable elements to absorb

vibration as taught by Tondato; and the use of either of these materials is considered to be a matter of choice.

### ***Response to Arguments***

7. Applicant's arguments filed 10/28/05 and 11/18/05 have been considered but found to be non-persuasive. Applicant argues that Pradel's insulator 9's exterior surface is not contiguous with the inner surface of the cup 4. A copy of the definition of "contiguous" is enclosed for Applicant's record. As stated above, Pradel's insulator 9's exterior surface is contiguous with the inner surface of the cup 4 as shown in figure 1 wherein insulator 9 is touching the cup 4 on the right of figure 1. Applicant further argues that the flange of Pradel is not uniformly positioned relative to said ledge. It is interpreted that Pradel's flange is positioned relative to said ledge with a pattern as shown in figure 1 such that the exterior of the insulator 9 would touch and not touch the inner surface of cup 4 in the pattern repeating circumferentially in order to prevent rotation as stated in column 3, lines 50-54, of Pradel. Based on the above stated reasons, the rejection is still deemed proper and is repeated above.

8. It is further noted that Applicant did not further amend the claims as proposed in the interview dated 11/15/05 wherein the relationship between the insulator 32 and the cup 16 of the instant invention is to be in direct contact at all time for the entire exterior and interior surfaces, respectively.

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Nguyen whose telephone number is (571) 272-7121. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan can be reached on (571) 272-6786. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lan Nguyen  
Primary Examiner  
Art Unit 3683

 2/1/08

